

Table 1: A comparison of different average body parts and body weight of *T. tridentatus* with *C. rotundicauda* and *T. gigas*

Name of species	Sex	Carapace length (mm)	Carapace width (mm)	Telson length (mm)	Body weight (gm)
<i>C. rotundicauda</i>	Male	242	311	240	184.1
	Female	303	292	211	488.1
<i>T. gigas</i>	Male	199	205	169	145.6
	Female	248	219	146	398.7
<i>T. tridentatus</i>	Male	365	410	280	2,410.5
	Female	510	500	340	6,900.6

distribution of *T. tridentatus* and *T. gigas* in Hong Kong, whereas Chiu and Morton (1999) observed the occurrence of *T. tridentatus* and *C. rotundicauda* along these coasts. The mature pairs of all the extant species of the horseshoe crab come to the shore for breeding purpose (Sekiguchi *et al.* 1977).

C. rotundicauda was found along all the three sampling sites, with maximum population along the coast of Tok Bali. The maximum congregation of *T. gigas* was reported along the coast of Balok (Dr. Annie Christianus pers. comm.). It is surprising to note that though the density of *T. tridentatus* was reported to deplete considerably in Japan (Dr. Glenn Gauvry

pers. comm.), a high density of this species was found along the coast of Sabah in eastern Malaysia. The depletion of *T. tridentatus* population along the coast of Japan might be due to destruction and reclamation of breeding beaches causing significant migration of this species towards other undisturbed suitable beaches. Our suggestion is also supported by Shuster *et al.* (2003). This could be one of the reasons for *T. tridentatus* for changing their breeding grounds and migrating towards undisturbed beaches of Malaysia for their active spawning. The present information will help environmentalists to implement suitable policies to protect the important breeding beaches for the survival of these three species of horseshoe crab along the Malaysian coast.

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20. FIRST RECORD OF THE MANGROVE ASSOCIATE *DERRIS TRIFOLIATA* LOUR. FROM GUJARAT

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During recent investigations on the mangrove diversity in southern Gujarat, a climber was found growing within the mangrove vegetation of Purna and Varoli estuaries (Fig. 1). Specimens collected from the locations were identified as *Derris trifoliata* Lour. It was sent to experts who confirmed

its identity and is thus being reported as the first record of its distribution from the mangrove forests of Gujarat.

Derris trifoliata Lour. is an erect shrub or a rambling climber growing to a length of up to 15 m. The leaves are compound with mostly 3 leaflets with a rounded base and

shortly acuminate apex. Flowers are pink, 1.0-1.2 cm and are borne on axillary racemes which are up to 15 cm long. The pods which are an important identification character, are single seeded, glabrous, reticulately veined and distinctly winged. It usually requires sufficient amount of freshwater to survive and has its coastal distribution from East Africa, Madagascar, and throughout tropical and subtropical Asia to tropical Australia. It is recorded in several coastal communities and is a frequent constituent of the back mangrove community (Tomlinson 1986). In India, it is reported to occur in the intertidal forests of all the coastal states except Gujarat (Thothathiri 1982; Banerjee *et al.* 1989; Rajendran and Sanjeevi 2004).

The mangrove forests in Gujarat have generally been described as being shrubby in nature and having low diversity compared to the other states of India (Anon 1987; Singh 2006). The mangrove forests of Kachchh and Jamnagar have received much attention of researchers, whereas mangrove forests in southern Gujarat have received comparatively little attention and hence the diversity of these mangroves remain uninvestigated. A recent report (February 2007) of several individuals of *Excoecaria agallocha* from the Varoli estuary (Dr. Sachin Chavan pers. comm.) is also an addition to the mangrove flora of Gujarat. A thorough investigation into the mangrove diversity of southern Gujarat could lead to further additions.

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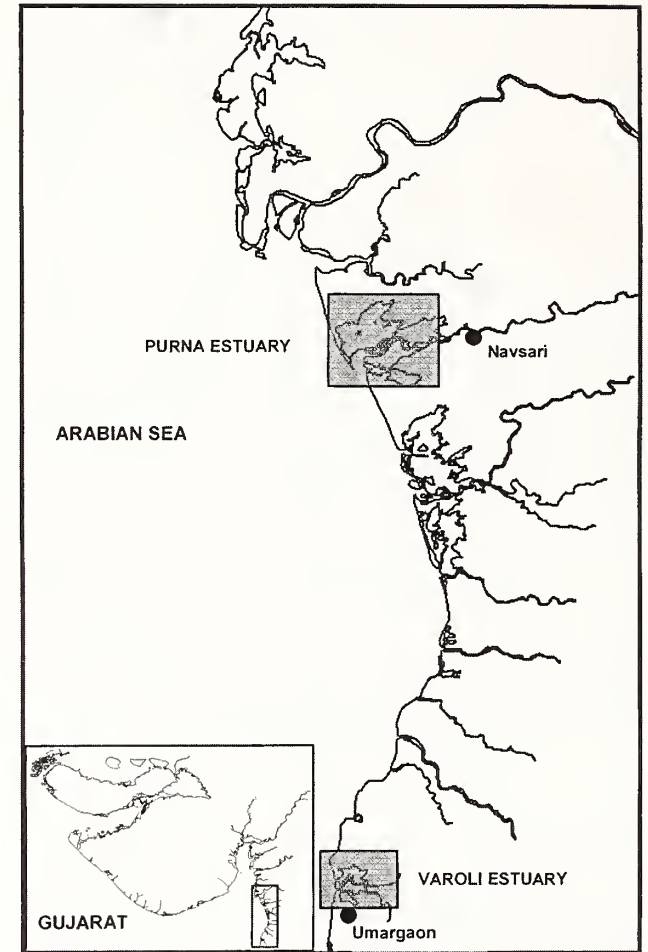


Fig. 1: Location of Purna and Varoli Estuaries

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21. PRELIMINARY OBSERVATIONS ON YELLOW MORNING GLORY *IPOMOEA HEDERIFOLIA* LINN. (CONVOLVULACEAE)

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Occurrence of yellow coloured flowers is recorded for the first time in Indian species of *Ipomoea hederifolia* Linn.

of Family Convolvulaceae. Plants were growing naturally as a part of natural vegetation in Sinhachalum hillocks of